

METHOD AND SYSTEM FOR DETECTING AND REDUCING DRAFT TUBE PRESSURE FLUCTUATIONS

Abstract

A method and system to reduce vibration in a turbine-generator including measuring a magnitude of radial vibration of a turbine shaft with at least one vibration sensor configured to generate a vibration signal indicative of vibration frequency; measuring a generator power output with a power output sensor configured to generate a generator power output signal; detecting vibration frequencies in a rough load zone range; engaging an air injection means when a magnitude of radial vibration detected in the rough load zone range is above a predetermined threshold; storing a generator power output level as a reference level when engaging the air injection means; and disengaging the air injection means when either the measured generator power output exceeds a predetermined level or the measured generator power output differs from the reference level by a predetermined amount.